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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

93-601

In the Matter of	)	
	)	
Co-channel Protection	)	RM - 8028
Criteria for Part 90,	)	
Subpart S Stations	)	
Operating above 900 MHz	)	

To: The Commission

COMMENTS ON THE NOTICE OF PROPOSED RULEMAKING

FLEET CALL, INC.

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June 14, 1993

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COMMENTS ON THE NOTICE OF PROPOSED RULEMAKING

I. INTRODUCTION

Fleet Call, Inc. ("Fleet Call") respectfully submits these Comments in response to the Notice of Proposed Rulemaking (the "Notice") in the above-captioned proceeding.1/

The Notice proposes extending the 40/22 dBu geographic interference protection criteria currently applicable only to 800 MHz Specialized Mobile Radio ("SMR") systems to all 800 and 900 MHz radio systems operating under all Part 90, Subpart S private land mobile radio service pools.2/ It seeks comments on whether the 40/22 standard provides licensees with adequate co-channel interference protection while achieving "reasonable spectrum

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1/ 8 FCC Rcd 2454 (1993).

2/ In 1991, the Commission permitted SMR systems to be located closer to co-channel stations than the then-required standard 113 km (70 miles), without waiver, through either consensual short spacing or compliance with the short-spacing table in Section 90.621(b) of the Rules. See Amendment of Part 90 of the Commission's Rules to Permit the Short-Spacing of Specialized Mobile Radio Systems Upon Concurrence of Co-Channel Licensees, 6 FCC Rcd 4929 (1991), aff'd., 7 FCC Rcd 6069 (1992), recon. pending.

efficiency,"3/ whether currently-used propagation prediction methodology is adequate,4/ and whether current standards sufficiently minimize co-channel interference from mobile units to short-spaced base stations.

II. BACKGROUND

Fleet Call has extensive experience and substantial expertise in providing mobile communications services. As the second largest licensee and operator of SMR systems in the United States, Fleet Call and its subsidiaries provide mobile communications for approximately 140,000 mobile units on a daily basis on both 800 MHz and 900 MHz SMR systems. Fleet Call provides mobile communications services that help Americans do their jobs more efficiently and effectively.

Moreover, Fleet Call was the first SMR licensee to seek Commission authority to implement advanced, highly-efficient wide-area digital voice mobile communications systems. On February 13, 1991, the Federal Communications Commission (the "Commission") authorized Fleet Call to construct and operate 800 MHz Enhanced Specialized Mobile Radio ("ESMR") systems in Chicago, Dallas, Houston, Los Angeles, New York and San Francisco.5/ These ESMR systems combine state-of-the-art digital multiplexing technology

with a low power, multiple base station configuration to increase by more than 15 times the capacity of Fleet Call's analog systems in each market while providing improved transmission quality and enhanced services. ESMR offers customers an unprecedented, integrated offering of dispatch, mobile telephone, paging and mobile data communications. Fleet Call's first ESMR system will be operational in Los Angeles in August 1993.

ESMR and similar advanced SMR systems use short-spacing; i.e., locating co-channel stations closer than 70 miles apart, to realize previously-unachievable improvements in spectrum efficiency, customer capacity and system coverage. Fleet Call's multiple, short-spaced ESMR base stations enable the frequency reuse necessary to meet customer demands for additional communications capabilities as well as in-building penetration for handheld portable mobile units. They implement the exclusive channel access merited by aggregate loading throughout a defined geographic market. As a pioneer in implementing advanced SMR systems, Fleet Call has a substantial interest in this proceeding proposing revisions to the Commission's co-channel separation rules.

III. DISCUSSION

In recent years, significant technological advancements in transmission methods and radio design have enabled more reliable land mobile radio communications over larger areas. The Commission has attempted to balance the increased spectrum efficiency possible from closer spacing of co-channel SMR systems and the concomitant need to provide existing SMRs a reasonable degree of protection

against interference. Thus, the Commission adopted rules to permit applicants for SMR stations to locate their base stations closer to co-channel licensees than the standard 70-mile co-channel mileage separation requirement under specified operating parameters using a 40/22 dBu protection standard.6/

Current rules protect non-SMR trunked systems and conventional loaded 800 MHz systems on a 40/30 dBu basis. The Notice concludes that there are no apparent technical reasons to have different protection criteria for SMR and non-SMR systems and that co-channel separations for all above-800 systems should be determined from a revised Table in Section 90.621 of the Rules. Fleet Call agrees that the same co-channel geographic separation criteria should be used for all Part 90, Subpart S stations and fully supports this aspect of the Notice.

The Commission should act cautiously, however, in revising the co-channel separation Table in Section 90.621(b) of the Rules. The Notice proposes revising the Table to protect existing systems at their actual operating parameters, rather than assuming high power operations for short spacing purposes. This would, of course, permit closer spacing of low-power facilities -- particularly multiple low-power base stations in adjacent or overlapping advanced SMR systems. Although designed to promote more intensive spectrum use, unduly optimistic co-channel separations could increase the incidence of destructive real-world co-channel interference and derogate the performance of advanced SMR systems.

6/ See n. 2, supra.

The Commission's goal in this proceeding is to provide existing licensees with adequate interference protection and, at the same time, achieve reasonable spectrum efficiency.7/ Fleet Call fully supports the Commission's objective, but is skeptical that reduced co-channel separations can be determined at this time. At this early stage in the implementation of advanced SMR systems, there is virtually no empirical data demonstrating the real world desirability of more intensive short-spacing of lower-power stations.8/ There is no data based on actual ESMR or other advanced SMR co-channel operations in a hostile real-world operating environment. Thus, any proposed revisions to the Table are based on theoretical propagation models and theorems. Additionally, with the first commercial use of TDMA digital technology in a private land mobile communications system still two months away, the impact of the proposed revisions on the performance of digital systems in the real-world RF environment is purely speculative and premature.

Moreover, Fleet Call and other SMRs are investing hundreds of millions of dollars to design, build and operate highly efficient enhanced digital SMR systems under current co-channel separation

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7/ Notice at para. 7.

8/ For example, Fleet Call is still a few months away from commencing commercial operation of its first ESMR system. Actual field testing reveals many cases of substantial variance between even the most sophisticated propagation prediction models and real world propagation results. In addition, as with any general rule, the proposed revisions cannot take into account all variations in terrain and localized propagation anomalies. For these reasons, the more conservative approach is likely to yield superior real-world results.

parameters. These systems will provide the most efficient use of the SMR spectrum ever achieved. Significantly different co-channel separation standards imposed at this time could require costly redesign and construction delays.9/

For these reasons, the Commission should act conservatively and cautiously in permitting closer co-channel spacing of above-800 private land mobile radio systems. There is already concern that mobiles operating at and beyond the reliable service contour of their own base stations may cause harmful interference to non-affiliated co-channel base stations.10/ The Commission's proposal seeks to promote spectrum efficiency through more intensive spectrum use; however, the Commission must be certain that permitting closer spacing of SMR systems does not exacerbate co-channel interference to authorized SMR systems.11/

9/ This could also create additional opportunities for "greenmail" by speculators attempting to profit from new short spacing opportunities.

10/ See Motorola Petition for Partial Reconsideration, PR Docket No. 90-34, filed October 21, 1992. As a result of the concerns expressed in Motorola's Petition, the Commission has suspended short spacing of SMR systems on a 40/30 dBu protection

IV. CONCLUSION

Fleet Call endorses elimination of separate rules governing separation distances for SMR and non-SMR systems. The Commission should retain its recently-adopted co-channel separation requirements.12/ A stable technical environment is essential at this early and critical stage in the development of advanced, more efficient SMR systems.

Respectfully submitted,

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11/(...continued)
the authorized SMR channel bandwidth than analog operations and will receive harmful interference from currently-permissible closely-spaced offset operations. Fleet Call endorses the solution to this problem advanced in the Joint Comments of the National Association of Business and Educational Radio, Inc., the American Mobile Telecommunications Association, the Industrial Telecommunications Association, and Motorola, Inc., filed June 14, 1993, in this proceeding.

12/ The Commission refined and affirmed its SMR co-channel separation standards less than one year ago. See 7 FCC Rcd 6069 (1992).

CERTIFICATE OF SERVICES

I hereby certify that a copy of the foregoing Comments of Fleet Call, Inc. has been mailed by United States first class mail, postage prepaid, this 14th day of June 1993, to the following:

Mr. Ralph A. Haller*
Chief, Private Radio Bureau
Federal Communications Commission
2025 M Street, N.W., Room 5002